

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the subject application:

Listing of Claims

31. (New) A method comprising:
- accessing a packet template in a memory, the packet template having at least one static field; and
- in response to an indication of an event, generating a packet on an integrated circuit, the packet based on the packet template.
32. (New) The method of claim 31, additionally comprising transmitting the packet to a communication controller for transmission over a shared medium.
33. (New) The method of claim 31, additionally comprising generating the packet template in response to receiving data to be used as the packet template.
34. (New) The method of claim 33, wherein the packet template includes at least two protocol layers, each of the at least two protocol layers including at least two static fields.
35. (New) The method of claim 34, wherein one of the at least two protocol layers includes an SNMP (Simple Network Management Protocol) layer.

36. (New) The method of claim 35, wherein the generated packet includes a SNMP trap PDU (protocol data unit).
37. (New) The method of claim 31, wherein the integrated circuit comprises an ASIC (application specific integrated circuit).
38. (New) The method of claim 31, wherein said generating the packet comprises inserting one or more non-static data into the packet.
39. (New) A method comprising:
- receiving data to be used to create a packet template;
- generating the packet template, the packet template including at least one static field;
- storing the packet template in a memory;
- receiving an indication of an event; and
- independently of a processor, generating, on an integrated circuit, a packet based on the packet template.
40. (New) The method of claim 39, wherein the packet template includes at least two protocol layers, each of the at least two protocol layers including at least two static fields.
41. (New) The method of claim 40, wherein one of the at least two protocol layers includes an SNMP (Simple Network Management Protocol) layer.
42. (New) The method of claim 41, wherein the generated packet includes a

SNMP trap PDU (protocol data unit).

43. (New) The method of claim 39, wherein the integrated circuit comprises an ASIC (application specific integrated circuit).
44. (New) The method of claim 39, wherein said generating the packet comprises inserting one or more non-static data into the packet.
45. (New) An apparatus comprising:

a memory to store at least one packet template, the at least one packet template having at least one static field; and

a packet generator to generate, on an integrated circuit, and in response to an indication of an event, a packet based on one of the at least one packet template.
46. (New) The apparatus of claim 45, additionally comprising an event processor to receive an indication of one or more events, and to notify the packet generator of the one or more events.
47. (New) The apparatus of claim 46, wherein one of the one or more events includes a software-generated event from a CPU (central processing unit).
48. (New) The apparatus of claim 46, wherein one of the one or more events includes an external event.
49. (New) The apparatus of claim 48, wherein the external event is polled from a device.
50. (New) The apparatus of claim 46, wherein:

the event processor additionally sends an event code and event data to the packet generator; and

the packet generator generates a packet based on one of the at least one packet templates by:

accessing the packet template in the memory, the packet template including a partial checksum;

storing the event code and the event data in the packet template;

calculating a complete checksum based on the partial checksum, and based on the at least one static field;

storing the complete checksum in the packet template; and

transmitting the packet template to a communication controller for transmission over a shared medium.

51. (New) The apparatus of claim 45, additionally including a bus control module to receive at least one packet template from a CPU (central processing unit).
52. (New) The apparatus of claim 51, wherein the bus control module additionally receives a partial checksum from the CPU.
53. (New) The apparatus of claim 45, wherein the packet comprises an SNMP (Simple Network Management Protocol) trap PDU (protocol data unit).

54. (New) The apparatus of claim 53, wherein the SNMP trap PDU comprises a UDP (User Datagram Protocol) packet portion.
55. (New) The apparatus of claim 54, wherein the complete checksum is stored in the UDP packet portion.
56. (New) A system comprising:
- a network interface card having a communications controller; and
- an integrated circuit coupled to the network interface card, the integrated circuit including:
- a memory to store at least one packet template, the at least one packet template having at least one static field; and
- a packet generator to generate, on an integrated circuit, and in response to an indication of an event, a packet based on one of the at least one packet template.
57. (New) The system of claim 56, additionally comprising an event processor to receive an indication of one or more events, and to notify the packet generator of the one or more events.
58. (New) The system of claim 57, wherein:
- the event processor additionally sends an event code and event data to the packet generator; and
- the packet generator generates a packet based on one of the at least one

packet templates by:

accessing the packet template in the memory, the packet template
including a partial checksum;

storing the event code and the event data in the packet template;

calculating a complete checksum based on the partial checksum,
and based on the at least one static field;

storing the complete checksum in the packet template; and

transmitting the packet template to a communication controller for
transmission over a shared medium.

59. (New) The system of claim 58, wherein the packet comprises an SNMP
(Simple Network Management Protocol) trap PDU (protocol data unit).
60. (New) The system of claim 59, wherein the SNMP trap PDU comprises a
UDP (User Datagram Protocol) packet portion.